

Remarks/Arguments:

Claims 1 and 3-9 are presently pending. Claims 10-16 have been cancelled. Reconsideration is respectfully requested in view of the following remarks.

Applicants thank the Examiner for the courtesy of the telephone interviews on September 16, 2009, and September 23, 2009. During the interviews, the features of Applicants' claim 1 were discussed. Additionally, the references relied upon by the Examiner were discussed. It was agreed that the Applicants would formally submit their arguments in a response to the Examiner, and that the Examiner would issue a new Office Action without a final rejection of the claims. Applicants herein set forth their arguments discussed during the interviews.

Claim Rejections Under 35 U.S.C. §§ 102 and 103

Page 2 of the Office Action sets forth "Claims 1, 3, 5, 10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kwon et al (US Patent No. 7,404,701 B2) in view of Mills et al (US Patent No. 3,759,817) in view of Mills et al (US Patent No. 3,715,302) in view of Bowers (US Patent No. 6,476,120)." Page 5 of the Office Action sets forth "Claims 4 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kwon...in view of Mills ['817] in view of Mills ['302] in view of Bowers...further in view of Seiki (US Patent No. 5,108,634)." Page 6 of the Office Action sets forth "Claims 6 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kwon...in view of Mills ['817] in view of Mills ['302] in view of Bowers...further in view of Nagai et al (US Patent No. 6,054,224)." Pages 6-7 of the Office Action set forth "Claims 7 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kwon...in view of Mills ['817] in view of Mills ['302] in view of Bowers...in view of Nagai...further in view of Egawa et al (US PGPub No. 2006/0166844 A1)." Page 7 of the Office Action sets forth "Claims 8 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kwon...in view of Mills ['817] in view of Mills ['302] in view of Bowers...in view of Nagai...further in view of Hannibal (US Patent No. 4,252,506)." Finally, page 8 of the Office Action sets forth "Claims 9 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kwon...in view of Mills ['817] in view of Mills ['302] in view of Bowers...in view of Nagai...further in view of Yamazaki et al (US Patent No. 6,940,204 B2)." Applicants respectfully submit that these rejections should be withdrawn for the reasons set forth below.

Claims 10-16 have been cancelled. Thus, the rejection of claims 10-16 is obviated.

Applicants' invention, as recited by claim 1, includes features which are neither disclosed nor suggested by the cited art, namely:

...a blended oil formed of a plurality of component oils...

...the blended oil ranges from a viscosity grade not lower than ISO VG3 to a viscosity grade not higher than ISO VG8...

...a first component oil includes a first characteristic having a boiling point at 350°C or over which is not less than 10% and not higher than 30% in volume ratio, and a second component oil includes a characteristic having a boiling point at 300°C or less which is not less than 50% and not higher than 70% in volume ratio.

This means that the blended oil has a viscosity grade not lower than ISO VG3 and not higher than ISO VG8. The blended oil is formed from a plurality of component oils. A first of the component oils has a boiling point at 350° C or over and comprises not less than 10% and not higher than 30% of the volume of the blended oil. A second of the component oils has a boiling point at 300° C or less and comprises not less than 50% and not higher than 70% of the volume of the blended oil.

The Office Action acknowledges that Kwon fails to teach a blended oil. Applicants respectfully submit that the addition of Mills '817, Mills '302, and Bowers fails to make up for the deficiencies of Kwon with respect to claim 1.

Mills '817 is directed to a blended oil. Mills '817 discloses a blended hydrocarbon oil formed by blending 50-98 parts of a severely hydrorefined naphthenic oil and 50-2 parts of a unhydrogenated naphthenic distillate. Mills '817 discloses that the blended oil can have a viscosity of 40 SUS at 100° F. Mills '817 discloses that the blended oil must be formed from a severely hydrorefined naphthenic distillate mixed with a raw, or unhydrogenated, naphthenic distillate in order to achieve the desired level of performance. See Mills '817 at column 1, line 23 to column 2, line 5; column 3, lines 25-34; and column 5, lines 31-39.

Mills '302 is directed to a refrigeration oil. Mills '302 discloses a blended oil formed from 50-75 percent hydrorefined naphthenic oil and 50-25 percent dewaxed paraffinic oil. Mills '302 discloses that the blended oil has a viscosity of between 75-750 SUS. Mills '302 further

discloses that paraffinic oil is used in place of naphthenic oil in order to achieve a wide boiling range for the blended oil. See Mills '302 at column 2, lines 51-54; and column 3, lines 7-16.

Bowers is directed to a refrigerant composition. Bowers discloses a mineral oil having a boiling point of about 260° C. See Bowers at column 3, lines 6-11.

As described above, Mills '817 discloses an oil consisting solely of a severely hydrorefined naphthenic oil and a unhydrogenated naphthenic distillate. Mills '817 fails to disclose, teach, or suggest the boiling points of either of these components. This is different from the claimed invention because claim 1 requires the first component oil to have a boiling point at 350° C or over and the second component oil to have a boiling point at 300° C or less.

Additionally, as described above, Mills '302 discloses an oil consisting solely of a hydrorefined naphthenic oil and a dewaxed paraffinic oil. Mills '302 fails to disclose, teach, or suggest the specific boiling points of either of these components. This is also different from the claimed invention because claim 1 requires the first component oil to have a boiling point at 350° C or over and the second component oil to have a boiling point at 300° C or less.

As described above, Bowers discloses a mineral oil having a boiling point of about 260° C. The Office Action recites that the mineral oil of Bowers is a naphthenic oil. However, the Office Action provides no support for this statement. Bowers fails to disclose, teach, or suggest that the disclosed mineral oil is a naphthenic oil. Additionally, the Office Action fails to suggest any reason that one of ordinary skill in the art would substitute the mineral oil of Bowers for any of the naphthenic oils of Mills '817 and Mills '302. Accordingly, Applicants respectfully submit that the Office Action fails to establish a case of *prima facie* obviousness of claim 1 based on the mineral oil disclosed in Bowers.

Furthermore, none of the references relied on by the Examiner discloses, teaches, or suggests a component oil having a boiling point at 350° C or over. The Office Action recites that "it would have been obvious to one having ordinary skill in the art of compressors at the time of the invention to use a paraffin oil within the [boiling point] range of claim 1." In support of this statement, the Office Action recites that "Mills ['302] teaches the paraffin oil as having a higher boiling point than the naphthenic oil." Applicants respectfully disagree. Mills '302 only discusses the boiling point of the blended oil. Mills '302 fails to disclose, teach, or suggest that the paraffinic oil has a higher boiling point than the naphthenic oil. In any case, Mills '302 fails to disclose, teach, or suggest that the paraffinic oil has a boiling point at 350° C

or over. Accordingly, Applicants respectfully submit that the Office Action fails to establish a case of *prima facie* obviousness of claim 1 based on the paraffinic oil disclosed in Mills '302.

Finally, Applicants respectfully submit that the blended oil of Mills '817 is not properly combinable with the blended oil of Mills '302. As described above, Mills '817 discloses an oil consisting primarily of a severely hydrorefined naphthenic oil and an unhydrogenated naphthenic distillate. Mills '817 makes clear that it is the combination of these two components that enables the desired high level of performance. See Mills '817 at column 5, lines 31-39.

In contrast, as described above, Mills '302 discloses an oil consisting only of a hydrorefined naphthenic oil and a dewaxed paraffinic oil. Mills '302 discloses that it is the use of the paraffinic oil instead of another naphthenic oil that enables the blended oil to obtain the desired higher boiling point. See Mills '302 at column 2, lines 52-54.

Applicants respectfully submit that the addition of a paraffinic component to the oil of Mills '817, as taught by Mills '302, would render the blended oil of Mills '817 unsuitable for its intended purpose of achieving high performance. Likewise, Applicants respectfully submit that the addition of an unhydrogenated naphthenic component to the oil of Mills '302, as taught by Mills '817, would render the blended oil of Mills '302 unsuitable for its intended purpose of achieving a blended oil with a high boiling point. Accordingly, Applicants respectfully submit that Mills '817 may not be properly combined with Mills '302 to reject claim 1.

For all of the above reasons, Applicants respectfully submit that Kwon, in view of Mills '817, Mills '302, and Bowers, fails to disclose, teach, or suggest "a blended oil formed of a plurality of component oils...the blended oil rang[ing] from a viscosity grade not lower than ISO VG3 to a viscosity grade not higher than ISO VG8...a first component oil includ[ing] a first characteristic having a boiling point at 350°C or over which is not less than 10% and not higher than 30% in volume ratio, and a second component oil includ[ing] a characteristic having a boiling point at 300°C or less which is not less than 50% and not higher than 70% in volume ratio," as recited in claim 1.

It is because Applicants' claimed invention includes a blended oil formed of a plurality of component oils, the blended oil ranging from a viscosity grade not lower than ISO VG3 to a viscosity grade not higher than ISO VG8, a first component oil including a first characteristic having a boiling point at 350°C or over which is not less than 10% and not higher than 30% in

volume ratio, and a second component oil including a characteristic having a boiling point at 300°C or less which is not less than 50% and not higher than 70% in volume ratio, that the following advantages are achieved. With this oil, "it is possible to prevent PET (polyethylene terephthalate) or the like extracted in the lubricant due to evaporation of the lubricant at the discharge reed or the like from being deposited on the surface of the discharge reed or the like." See the original application at page 6, lines 2-4.

Accordingly, for the reasons set forth above, claim 1 is allowable over the cited prior art. Therefore, withdrawal of the rejection and allowance of claim 1 is respectfully requested.

Claims 3 and 5 include all of the features of claim 1, from which they depend. Thus, claims 3 and 5 are also allowable over the cited prior art for at least the reasons set forth above with respect to claim 1. Therefore, withdrawal of the rejection and allowance of claims 3 and 5 is respectfully requested.

Claims 4 and 6-9 stand rejected as unpatentable over Kwon, Mills '817, Mills '302, and Bowers further in view of one or more of Seiki, Nagai, Egawa, Hannibal, and/or Yamazaki. Applicants respectfully submit that each of Seiki, Nagai, Egawa, Hannibal, and Yamazaki fails to disclose "a blended oil formed of a plurality of component oils...the blended oil rang[ing] from a viscosity grade not lower than ISO VG3 to a viscosity grade not higher than ISO VG8...a first component oil includ[ing] a first characteristic having a boiling point at 350°C or over which is not less than 10% and not higher than 30% in volume ratio, and a second component oil includ[ing] a characteristic having a boiling point at 300°C or less which is not less than 50% and not higher than 70% in volume ratio," as recited in claim 1. Accordingly, Applicants respectfully submit that the addition of Seiki, Nagai, Egawa, Hannibal, and/or Yamazaki fails to make up for the deficiencies of Kwon, Mills '817, Mills '302, and Bowers with respect to claim 1. Claims 4 and 6-9 include all of the features of claim 1, from which they depend. Thus, 4 and 6-9 are also allowable over the cited prior art for at least the reasons set forth above with respect to claim 1. Therefore, withdrawal of the rejection and allowance of claims 4 and 6-9 is respectfully requested.

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In view of the arguments set forth above, the above-identified application is in condition for allowance, which action is respectfully requested.

Respectfully submitted,


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